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Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

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APR 08 1998

Mr. Douglas R. Sherwood
Hanford Project Manager
U.S. Environmental Protection Agency
712 Swift Boulevard, Suite 5
Richland, Washington 99352-0539

Dear Mr. Sherwood:

SAMPLING AND ANALYSIS PLAN FOR THE REDOX PLUTONIUM LOADOUT HOOD, DOE/RL-97-75, REV. 0

Attached for your approval is the subject document (Attachment 1). Comments received from U.S. Environmental Protection Agency staff have been incorporated. Also provided is the Concurrence/Approval Page (Attachment 2) and comment resolutions (Attachment 3).

If you want to discuss this matter further or require additional information, please contact me on 372-2282.

Sincerely,

John P. Sands, Project Manager
Decontamination and Decommissioning Project

DDP:JPS

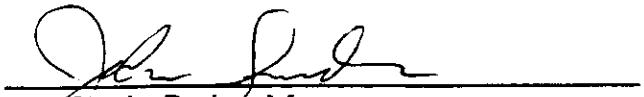
Attachments: As stated

cc w/ attachs:
P. S. Innis, EPA
A. D. Huckaby, Ecology

SAMPLING AND ANALYSIS PLAN FOR
THE REDOX PLUTONIUM LOADOUT HOOD

CONCURRENCE / APPROVAL PAGE 057699

CONCURRENCE:



J. P. Sands, Project Manager
U. S. Department of Energy
Richland Operations Office

APPROVED BY:

P. S. Innis
U. S. Environmental Agency

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RESOLUTIONS TO EPA COMMENTS ON THE
Sampling and Analysis Plan for the REDOX Plutonium Loadout Hood, DOE/RL-97-75, dated September 1997

COMMENT #1

Section 1.1.2, page 5, second paragraph, third sentence. Additional information should be provided on the type of sample taken (e.g., liquid from the leak, residues below the leak, etc.) This will have bearing on COPC locations specified in Table 2.

RESOLUTION. This comment has two parts; part a) will be incorporated by changing the second paragraph of 1.1.2, third sentence from "A sample was collected and analyzed for radiological ..." to "A sample of residue from beneath the drip was collected and analyzed for radiological ...". Regarding part b) we added a row to Table 2 for Lead. This row will be placed immediately after the Chromium row and will have the same data as the Cadmium row. For further clarification we added the following information after the fourth sentence; "The cadmium and chromium constituents in the sample were leached from piping by nitric acid solution. The lead constituent in the sample is suspected to be from oxidized shielding and paint in the immediate vicinity."

COMMENT #2

Section 1.1.2, page 5 and 6. A reference for the sampling information should be provided. If no reference is available, complete sample data should be made available.

RESOLUTION. This will be incorporated by referencing the Occurrence Report. Adding "(Occurrence Report Number RL--BHI-DND-1996-0006)" after the word material in the 2nd sentence of the 2nd paragraph of 1.1.2.

COMMENT #3

Section 1.1.3, page 7 and 8. A reference to PCBs is made in Table 2 but not discussed on the preceding page. Please clarify this inconsistency. Additionally, lead is noted in the sampling event on page 5 and 6 but specified only as part of construction materials or light bulbs(?) on page 7. Please rectify this.

RESOLUTION. This comment will be incorporated by clarifying data in the PCB row on Table 2. In addition, we will strike out (light bulbs) following Lead in the Inorganics section of COPC list on page 7 and we will add the word "Leaky" in front of electrical fixtures following Polychlorinated (PCBs) in the Organic Materials section of COPC list on page 7.

COMMENT #4

Section 1.2.1.1, page 13. It should be noted that EPA is the lead regulatory agency on CERCLA actions at REDOX, including the sampling at the Plutonium Loadout Hood.

> **RESOLUTION.** This comment will be incorporated by adding "The lead regulatory agency for CERCLA actions at REDOX is EPA." As the second sentence to section 1.2.1.1.

COMMENT #5

Section 1.2.1.2, page 13. This section should reflect the current schedule. Phase I sampling is noted to occur in November 14-20. This is prior to the draft review. Additionally, it is not clear under what authority the D&D of the Loadout hood will occur. The detailed work plan for 1998-2000 does not indicate any action in the REDOX building specific to the Loadout hood. Additionally, here is no CERCLA document that covers D&D of the Loadout Hood. It is assumed that an EE/CA may be developed for this action.

> **RESOLUTION.** This comment will be incorporated by changing "November 14-20, 1997" to "January/February, 1998". In addition, we will replace the last two sentences with the following words. "It is expected that D&D of the Pu Loadout Hood will occur under a CERCLA removal action. Currently D&D activities are not funded or scheduled. Outcome of the sampling and analysis will aid in determining scope. funding, and timeline for future D&D activities. It is anticipated that D&D of the Pu Loadout Hood will commence after the completion of the 233-S Process Hood area. This will allow lessons learned from removal of 233-S Process Hood to be applied to the REDOX Pu Loadout Hood project."

COMMENT #6

Section 1.2.2.3, page 14, Decision Statement #2. Designation should be based on characteristic designation determined from sampling and process designation. The text should reflect this.

> **RESOLUTION.** This comment will be incorporated by using similar words that have been proposed to in the SAP for 233-S. It is recommended that we replace Decision Statement #2 with the following; "Determine if the waste streams in the Plutonium Loadout Hood contain dangerous waste, low-level radioactive waste, mixed waste, hazardous waste, TRU waste, or TRU-mixed waste.
>
> - If the sample obtained from the waste stream exceed the dangerous waste criteria (WAC 173-303-80, -81), then the waste stream must be treated as dangerous waste.

- If the contamination concentrations exceed the hazardous waste criteria (WAC 173-303-090 (2)-(8)), then the waste must be treated as hazardous waste.

- If the contamination concentrations exceed the radiological waste criteria (DOE Order 5820.2A, *Radioactive Waste Management* [DOE 1998]), then the material is radioactive and must be treated as low-level waste.

- If the contamination concentrations exceed the mixed waste criteria as defined by (DOE Order 5820.2A, *Radioactive Waste Management* [DOE 1998]), then the material must be treated as mixed waste.

- If the contamination concentrations exceed the TRU waste criteria as defined by (DOE Order 5820.2A, *Radioactive Waste Management* [DOE 1998]), then the material must be treated as TRU waste.

- If the contamination concentrations exceed the dangerous waste criteria (WAC 173-303) and the TRU waste criteria as defined by (DOE Order 5820.2A, *Radioactive Waste Management* [DOE 1998]), then the material must be treated as TRU-mixed waste."

COMMENT #7

Table 6, page 15, #2-2. The text specifies that the "detection of nondangerous waste will increase cost significantly . . . ". It is not clear why nondangerous waste discovery would increase cost. Please clarify.

RESOLUTION. This comment will be incorporated by deleting the 2nd sentence of Cost Impact: in the Consequences of Alternative Action column in row 2-2 on page 15. In addition, change Risk Impact: to Low.

COMMENT #8

Section 1.2.5.2, page 16. It is unclear why ERDF WAC are the primary action levels specified in this section. It is also unclear which alternative actions are being evaluated. Please clarify this.

RESOLUTION. As specified in response to Comment #5, It is anticipated that D&D of the Pu Loadout Hood will proceed under a CERCLA removal action. Therefore, ERDF will be the primary disposal option. Alternatives for D&D of the loadout hood have not been identified at this time. Basic alternatives (removal or stabilization) will be detailed in a future EE/CA for the loadout hood. TRU waste will go to CWC or other appropriate Hanford Site storage facility until disposal options are available.

COMMENT #9

Table 8, page 18. Hexone is noted as having an unlimited action level. The ERDF WAC for Hexone (MIBK) is currently stated at 33 mg/kg as defined in the LDR for that constituent.

> **RESOLUTION.** This comment will be incorporated by changing "Unlimited" in Table 8 to "33 mg/kg".

COMMENT #10

Section 1.2.5.3, page 19, Action Rule #2. The first sentence should state that "media will be designated as a dangerous waste, treated as required, and will be disposed . . . ".

> **RESOLUTION.** This comment will be incorporated by adding ", treated as required," as defined above.

COMMENT #11

Section 2.2.5, page 25. This section references Table 11 regarding QC samples yet specifies no field QC samples. This leads to confusion. It is recommended that field equipment blanks be taken prior to sampling.

> **RESOLUTION.** This comment will be incorporated by deleting everything in the third sentence after SW-846. Field equipment blanks will not be addressed.

COMMENT #12

Section 2.4.2, page 28. The first sentence implies that validation is optional. Some level of data validation should be completed, though Level C data validation is not necessary.

> **RESOLUTION.** This comment will be incorporated by deleting ", if required," after the eighth word in the first sentence and deleting the fifth word "as" in the second sentence.

COMMENT #13

Section 3.2, page 29, third paragraph. The last two sentences discuss designation of waste, assumed to be equipment. It must be agreed to by the agencies that the sampling done is considered representative for that material prior to designation.

> **RESOLUTION.** This comment will be incorporated by adding the words "will be determined through consultations with the characterization team, including RL and EPA

and" after the fourth word in the third paragraph, in the fifth sentence of section 3.2.

COMMENT #14

Section 3.2, pages 29 through 33. Some inconsistencies exist between the COPCs presented and those found in Table 2. For example, lead is specified as a COPC of paint in Table 2. yet waste stream #1 lists lead (as it should) for interior pipe sampling.

> **RESOLUTION.** This comment was examined and the following changes will be made to remove any inconsistencies. See Comment #3 for section 1.1.3 page 7&8. In addition we will change paragraph 3.2.5 in the following manner. Add "testing" after the word "Characteristics" in the third paragraph third line. Replace the forth, through the seventh lines with the same material that is in paragraph 3.2.4, third paragraph, third through the fifth lines.

COMMENT #15

Section 3.2.3, page 31. This section notes that waste stream #1 sampling should be considered adequate to provide an upper bound on the hood interior and on process vessels. This seems unclear as waste stream sample #1 covers the residual material on the interior of the pipe. Samples for surface contamination should be taken separately to adequately characterize the exterior surfaces.

> **RESOLUTION.** The sample point for sample #1 is just upstream from the original PR can. Spills in the hood were from the PR can overflowing. The DQO Team determined that there would be no difference between constituents in vessels and outside of the vessels.

COMMENT #16

Section 3.2.6, page 32. The decontamination waste swipe should be biased high to set upper concentrations. Some level of field screening should be used to determine a higher concentration swipe for inclusion as a sample.

> **RESOLUTION.** This comment will be incorporated by the following changes. Replace the words "will be selected at random and" in the 3rd sentence, with "from initial decontamination activities that is representative, based on field screening,"

COMMENT #17

Section 3.2.8, page 33. The intent of this section is not clear. This document is to be used for characterization of the REDOX Loadout hood. This paragraph implies that D&D activities are concurrent with the sampling. DOE should recognize that no CERCLA authorization has been

given to conduct this action and any waste resulting from the D&D of the process hood would result in waste that is not available for disposal in ERDF.

> **RESOLUTION.** No removal will be performed during sampling activities. No D&D of the loadout hood will be performed until a CERCLA Action Memorandum is issued by EPA authorizing the work. Text in Section 3.2.8 will be replaced with "No sampling will be conducted for designating Solid Waste Streams. It is expected that all future waste streams will be dangerous, mixed, or radioactive (low-level or TRU)."

COMMENT #18

Section 3.5, page 34. Insufficient detail is provided on the handling, storage, and disposal of waste generated as a result of the sampling efforts at the Loadout hood. Detail should include provided concerning aspects in the form of a waste control plan. Additionally, the last sentence is somewhat confusing. Sample material being returned from the lab should be handled in accordance with the lab/BHI contract and disposed of as specified in this section. No additional approval is necessary once the SAP has been approved.

> **RESOLUTION.** Due to the uncertain nature and quantities of waste volumes and constituents, the DQO team determined that this information should be specified in follow-on documents, not in the SAP. A Site Specific Waste Management Instruction (SSWMI) will be prepared in the field work instruction. A copy of the SSWMI will be provided to EPA.